

Grade 8 - Slope and Similar Triangles - Test

Common Core 8.EE.B.6 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks slope from similar triangles and the equations $y = mx$ and $y = mx + b$ (Common Core 8.EE.B.6). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Slope and Similar Triangles
- Standards: 8.EE.B.6
- Time: 45 minutes
- Total: 20 points

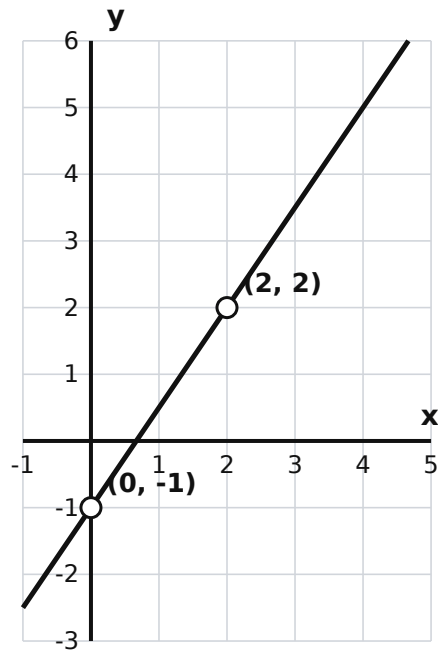
Question 1 - Find the slope [2 pts]

- Find the slope through $(2,1)$ and $(6,9)$. (1 point)
- Find the slope through $(-3,4)$ and $(3,-2)$. (1 point)

Question 2 - Read an equation [2 pts]

- State the slope and y-intercept of $y = \frac{2}{3}x - 5$. (1 point)
- Rewrite $4x + 2y = 10$ as $y = mx + b$. (1 point)

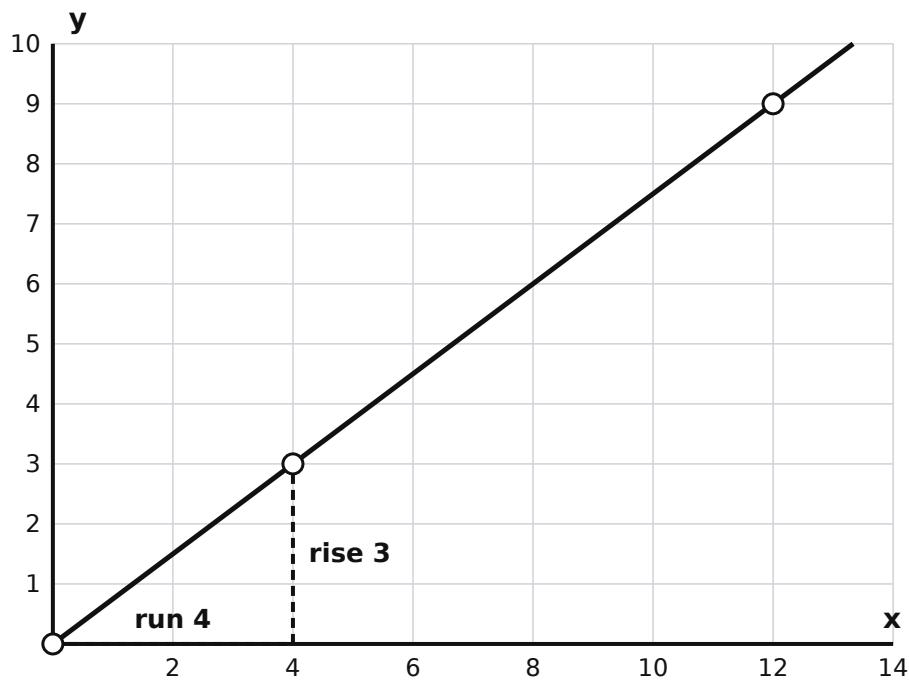
Question 3 - Equation from a graph [3 pts]



A line.

Write the equation of the line.

Question 4 - Similar triangles [3 pts]

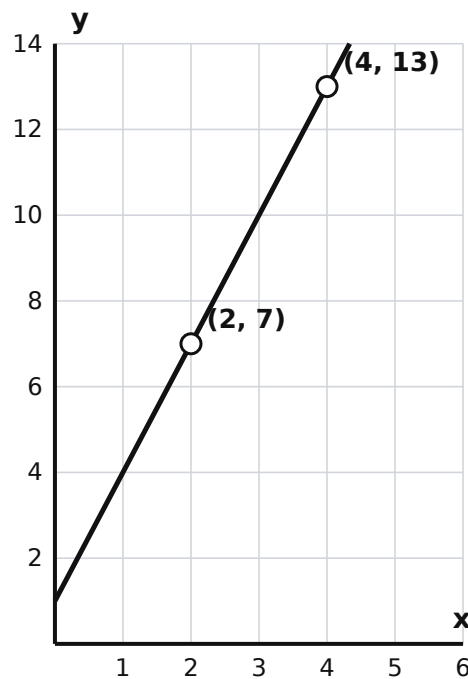


A small triangle on a line.

A larger triangle on the same line has a run of 12. Find its rise and explain why the triangles

are similar.

Question 5 - Two points [3 pts]



Two points on a line.

Write the equation of the line through $(2, 7)$ and $(4, 13)$.

Question 6 - Parallel [2 pts]

A line is parallel to $y = -2x + 4$ and passes through $(0, 9)$. Write its equation.

Question 7 - Streaming [3 pts]

A streaming service charges a \\$6 sign-up fee plus \\$9 per month. Write an equation for the total cost y after x months. What are the slope and y-intercept, and what does each mean?

Question 8 - Explain [2 pts]

Ava says any two points on a line give a different slope. Use similar triangles to show she is incorrect.